

**REMARKS**

In view of the amendments above and remarks to follow, Claims 1-27 are pending in the Application. Claims 1 and 10 have been amended to correct for minor informalities and to provide grammatical correctness.

**REJECTIONS UNDER 35 USC 112, first paragraph**

1. Claims 1-27 stand rejected under 35 USC 112, first paragraph as failing to comply with the written description requirement. The rejection should be withdrawn in view of the remarks below.

The Office Action alleges that:

Claims 1-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. (Office Action, page 2, para 3).

K is a constant that does not have to depend from polymerization. More particularly, Applicant's invention is based on the finding of the critical relationship between the amount of decomposed alkalipersulfate (W) and the particle size of the pre-agglomerated rubber particles ( $D_0$ ). Accordingly, the relevant parameters relate as

$$K = W * (1 - 1.4S) * D_0$$

wherein S is the amount of the optional salt and K is a constant of 2.3-6.0 (Specification, page 1, lines 8-13). W can be calculated before polymerization. For example, one skilled in the art knows that decomposition of potassium persulfate can be determined using an Arrhenius decomposition rule:

$$k = A \exp (-H/RT)$$

$$\text{where } A = 41.127 \text{ min}^{-1}$$

$$H = 35461 \text{ cal/mol}$$

$$R = 1.99 \text{ cal/mol/deg}$$

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T is temperature in degrees Kelvin.

Thus, W and K are not based on polymerization, and  $D_o$  can be determined.

Accordingly, one skilled in the art reading the claims in light of the specification could practice Applicant's invention.

2. Claims 1-27 stand rejected under 35 USC 112, first paragraph as failing to comply with the enablement requirement. The rejection should be withdrawn in view of the remarks below.

The Office Action alleges that:

The recited invention is non-enabling as evidenced by the table 1.

The K values recited in said table 1 cannot be obtained from the given  $D_o$  and KPS charged. Example 1 would yield 19.35 (129 nm x 0.15) not 5.8, for example. (Office Action, page 3, para 2).

The S value can be obtained in percent (%) based on the latex solids (Specification, page 3, line 7). The amount of S (the salt) is 0 to 0.6 percent relative to the latex solids (Specification, page 4, lines 30-31). Further, "All the experiments, except example 3 that contained no salt, contained 0.5 ppm of  $Na_2SO_4$ " (Office Action, page 8, lines 23-24). The value of K can then be determined. Thus, one skilled in the art reading the claims in view of the Specification could practice Applicants' invention. Reconsideration is requested.

3. Claims 1-27 stand rejected under 35 USC 112, first paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The rejection should be withdrawn in view of the remarks below.

The Office Action alleges that:

The recited formula is indefinite and confusing absent particular units for the recited with respect to the recited K, W, S and  $D_o$  in view of the table 1. Are absolute values used? And then what value is used for 00.85 for 85 nm or 0.085 for 0.085  $\mu m$  for example. (Office Action, page 3, para 5).

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Regarding K, W, S and D<sub>0</sub> in the specification, the following is provided:

K is a constant of 2.3-6.0.

W is parts per one hundred parts by weight (pphr) of latex solids of decomposed alkalipersulfate,

D<sub>0</sub> refers to the weight average particle size, in nanometers (nm), of the pre-agglomerated (un-agglomerated) rubber, with the proviso that

D<sub>0</sub> is at least 85 nm, preferably at least 100 nm,

S is the amount of the optional salt (in % based on latex solids) and,

K is a constant of 2.3-6.0, preferably 3-4, most preferably 3.25-3.50  
(Specification, page 3, lines 1-8).

Regarding "Absolute values," Table 1 provides values and Applicant is respectfully requesting the Examiner to further explain what is meant by "absolute values."

Regarding the value for D<sub>0</sub>, the units are provided in Table 1 as nm (Specification, Table 1). Also, the units for D<sub>0</sub> are defined in the specification as filed.

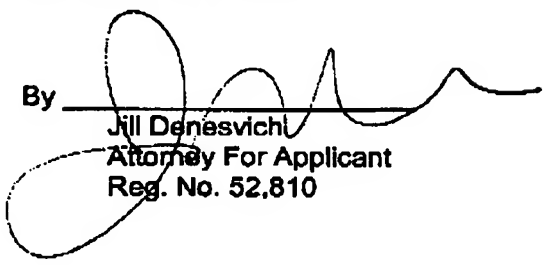
Accordingly, the units are provided in the specification as filed and are applicable for Table 1.

Regarding Claim 10, Claim 10 has been amended to correct ungrammatical punctuation of an extra period. Reconsideration is requested.

In view of the above amendments, Applicant submit that the claims are in condition for allowance and the Examiner would be justified in allowing them.

Respectfully submitted,

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